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SEVENTEENTH-CENTURY THEORIES OF EMOTION AND THEIR CONTEMPORARY RELEVANCE¹

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ABSTRACT

This paper takes a look at seventeenth-century theories of emotion, and their influence on contemporary philosophical and psychological approaches to the subject. Although at a first glance some of these seventeenth-century theories may seem to be outdated, this is often a result of a simplistic reading, and in fact there are promising ways to "update" these theories. Reading seventeenth-century theories from our own perspective reveals new aspects of the work of our predecessors, which, in turn, can inspire further contemporary developments.

Key words: emotion, seventeenth century, Descartes, Spinoza, neuroscience

The past few decades have witnessed a renewed interest in the theory of emotions both in philosophy and psychology.² Work in this area has relied heavily on certain seventeenth-century philosophical theories of emotion (at the time variously termed theories of "passion", "affect", or even "action"). I shall start this paper by giving a very brief overview of the place of emotion theory in seventeenth-century art and thought. This will be followed by a sketch of two seventeenth-century theories of emotion, those of Descartes and Spinoza. I shall identify certain ways in which these theories have influenced or could (and

¹ This article presents the preliminary results of my research in the frame of the project "Actuality of Enlightenment: the Moral Science of Emotions," which was generously supported by the Royal Flemish Academy of Sciences and Arts (KVAB) in Belgium. I would like to express my deep gratitude to Martin Moors, who initiated, and Herman De Dijn, who supported the project.

² In her *Bericht* for the journal *Information Philosophie* Sabine A. Döring also speaks of *Die Renaissance des Gefühls in der Gegenwartsphilosophie*: Döring 2005.

perhaps should) influence our contemporary thinking on the subject.

In the seventeenth century, a great variety of theories of emotion, implicit and explicit, competed for popular recognition. These theories emerged from different aspects or layers of culture. One such layer was popular pulp literature with erotic or pornographic content, which contained rather implicit accounts of emotion. Another was literature, of different sorts, intended for more sensitive or more educated people. Examples are pastoral novels, novels or manuals for courtiers, and plays written and staged for the old noble and the new *bourgeois* by writers like Corneille and Molière. Theatre and music, as well as painting, illustrated theories of emotion in a more or less conscious manner. Furthermore, some artists attempted to understand certain aspects of their own profession through (at least sketches of) theories of emotion. Lodewijk Meijer (1630-1681), who is well-known as a friend of Spinoza, was a theoretician as well as a practitioner of the art of theater, and composed dramas displaying the influence of Cartesian emotion theory.³ Another example is the official painter of Louis XIV, Charles Le Brun (1619-1690), who gave a *Conférence sur l'expression générale et particulière* [scil. of the passions] (7 April 1668), which became the basis of the posthumously published *Méthode pour apprendre à dessiner les passions* (Le Brun, 1702).⁴

At a more theoretical level, earlier theories of emotion, like that of Aristotle's *Rhetoric* and the Doctor Angelicus' treatise on emotion in the *Prima Secundae* (Arts. 22-48) of his *Summa Theologiae* exerted an influence on education in the "liberal arts". Certain renaissance treatments of the subject, such as J. L. Vivès' (1492-1540) *De anima et vita* (1538) and J. Lipsius' (1547-1606) frequently re-edited *De Constantia* (1584), also had remarkable impact. From among authors in the seventeenth century itself, many are virtually unknown today to scientists, and even to philosophers not specialized in the field of the history of emotion theory. I will only mention a few works from the long list: J.-P. Camus' *Traité des passions de l'âme* (1614), Walther Charleton's *Natural History of the Passions* (Charleton 1674), Nicholas Coeffeteau's *Tableau des passions humaines, de leurs causes et leurs effets* (Coeffeteau 1620),⁵ Marin Cureau de la Chambre's *Les Caractère des passions* (Cureau de la Chambre 1640-1662), Louis de la Forge's *Traité de l'esprit de l'homme* (La Forge 1666), Antoine Le Grand's *Le sage des Stôiques, ou l'homme sans passions, selon les sentiments de Senèque* (Le Grand 1662), *Man Without Passion: or, the Wise Stoick, According to the Sentiments of Seneca* (Le Grand 1675), the chapters dedicated to the passions in Nicolas Malebranche's *De la recherche de la vérité* (Malebranche 1675), and writings that contributed to the so-called *amour-pur* debate,⁶ Edward Reynolds' *A Treatise of the Passions and Faculties of the Soul of Man* (Reynolds 1640), Jean-Francois Senault's *De l'usage des passions* (Senault 1641), Thomas Wright's *The Passions of the Mind in General* (Wright 1604).

³ See, for instance, Klever 1997, pp. 61-86, Meinsma 1983, pp. 194-198.

⁴ See also Montagu 1994, as well as Kirchner 1991, Allen 1998, Willehad 1981.

⁵ English translation: London, 1621.

⁶ See, for example, Schmaltz 2005 and Schmal 2005.

Evidently enough, our own general understanding of seventeenth-century philosophy is not shaped primarily by these authors. The people who exerted a longer lasting influence on subsequent intellectual history were those thinkers of early modernity who, in some way or another, were wedded to the new scientific ideal of their century: mechanical science – the likes of Hobbes, Descartes, Spinoza, Locke or Leibniz. As a matter of fact, all these philosophers wrote at least a chapter on the emotions. Until recently, however, these treatises and chapters were mostly treated as casual writings, falling outside their authors' main philosophical arguments. Anthony Kenny, one of the first to break with this tradition, gives the following diagnosis of this situation:

Research has been centred on the contemplative rather than the active, on the intellectual rather than the emotional and voluntary aspects of human life. Knowledge rather than action, belief rather than emotion, the intellect rather than the will have been the central topics of philosophical concern. (Kenny 1963, p. 1)

The theory of emotions had seemed to be neglected in other disciplines as well, for example in neuroscience. J. Panksepp, for instance, argues that behaviorism in psychology for a long time prevented his science from investigating emotions in a more thorough and philosophical manner:

Unfortunately, the neuroscientific approach remains poorly developed partially because of the insidious influence of a simpleminded 'behaviorism' that inhibited psychoneurological thought during the middle of this century. (Panksepp 1997, p. 21)

Despite the obstacles both in philosophy and psychology, in the past three decades, enormous progress has been made by the joint enterprise of emotion research. Some of the recently published books are historical in character, e.g., the pioneering book of Susan James, *Passion and Action. The Emotions in Seventeenth-Century Philosophy* (James 1997), Denis Kambouchner's masterful commentary on Descartes: *L'Homme des passions: Commentaires sur Descartes* (Kambouchner 1996), and the volume *The Soft Underbelly of Reason: The Passions in the Seventeenth Century*, edited by Stephen Gaukroger (Gaukroger 1998). Other works embark on original, systematic investigation. Examples are Robert Solomon's *The Passions* (Solomon 1977), Ronald de Sousa's *The Rationality of Emotions* (de Sousa 1987), Paul Ekman's publications from 1969 onwards,⁷ the *Handbook of Emotions* by Michael Lewis and Jeannette Haviland (Lewis & Haviland 1993), Nico Frijda's *The Emotions* (Frijda 1986), and *Understanding Emotions* by Keith Oatley and Jennifer M. Jenkins (Oatley & Jenkins 1996). What perhaps comes to mind first, however, are two books by Antonio Damasio that amply illustrate the interdisciplinary character of emotion research: *Descartes' Error: Emotion, Reason and*

⁷ For instance, Ekman, Friesen, & Ellsworth 1972; Ekman 1982.

the Human Brain (Damasio 1994) and *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (Damasio 2003).

In what follows I shall focus on those aspects of systematic research into the emotions that can be linked to seventeenth-century theories, specifically, to the work of Descartes and Spinoza, the two authors who exerted the greatest influence on contemporary theories. First, I shall present the accounts of Descartes and Spinoza in broad outline. Second, I will suggest ways in which the two accounts proceed along similar lines as (and could potentially contribute to) contemporary discussions. Third, I will look at Damasio's Descartes and Spinoza.

* * *

Descartes' *The Passions of the Soul*, published in 1649, is a masterpiece of *philosophia aulica*: Princess Elisabeth of Bohemia as well as Queen Christina of Sweden were among those who urged Descartes to write a treatise on the subject. This fact might contribute to an explanation of one of the peculiarities of this work: that instead of settling questions concerning Descartes's philosophy – most of all, concerning mind-body dualism⁸ – it opens up a whole new field of debate. In his pioneering metaphysical investigations—the *Meditations on First Philosophy* and the *Principles of Philosophy*, especially parts 1-2—Descartes puts forward a new system based on two kinds of substance, *res cogitans* and *res extensa*, each of which can in principle exist independently of the other's support. In contrast, in the treatise on the passions, he seems to advocate what we might call a strange sort of “*influxus psycho-physicus*”. On the one hand, we have an account of the human body: a system of nerves filled with extremely fine bits of matter—misleadingly called “animal spirits”—and the brain with the so-called “pineal gland” in its centre, suspended by an extremely fine thread. Descartes maintains that human as well as animal bodies function naturally, i.e., react to certain stimuli in the appropriate way, without any recourse to non-bodily processes. On the other hand, humans, unlike animals, also have *bon sens* or *bona mens*. That is, the mind, just like the body, has its own default settings that enable proper functioning, which, in the case of the mind, is the appropriate use of reason. At the same time, what distinguishes humans from beasts (and other, natural or artificial, “machines”) is the mind's phenomenally attested capacity to interfere with the body's natural mechanisms. However, if this is so, the following question can hardly be avoided: if the thinking thing and the extended thing are separate substances, how is this interference and battle between the (rational) soul and the mechanical body possible? As part of the answer Descartes has recourse to a sort of artifice, where the fine thread that is supposed to keep the pineal gland in balance has a crucial role: it enables the soul to influence some of the bodily reactions to bodily stimuli, that is, to re-arrange—at least some of—the original connections established by nature between sense perception and action. Having thus

⁸ See Garber & Wilson 1998. I cannot attempt here to assess this problem in general.

introduced a quasi-mechanical artifice to bridge the metaphysical gap between mind and body, Descartes could define the passions as follows:

After having considered in what respects the passions of the soul differ from all its other thoughts, it seems to me that we may define them generally as those perceptions, sensations or emotions of the soul which we refer particularly to it, and which are caused, maintained and strengthened by some movement of the spirits.⁹

Without dwelling at length on the antecedents and consequents of this definition,¹⁰ I would like to stress the fact that, due to his concern with physics and physiology, Descartes found it necessary to supplement traditional and popular treatments of emotion by a “mechanical” foundation for the phenomenal part of the theory. And even if this foundation turned out to be inadequate in the light of discoveries by modern neuroscience, it must be kept in mind that it was Descartes who laid the foundation for the methodological self-understanding of all the sciences of the brain, from neurophysiology via psychology, to research in artificial intelligence. One feature of his work that is very significant from a contemporary scientific perspective is that he deliberately breaks with the previously influential moral-theological approaches—which had had a tendency to evaluate emotions negatively—and advocates a value-free enquiry. In the short letter preceding *The Passions of the Soul*, Descartes writes:

I have changed nothing in the style, whose simplicity and brevity will reveal that my intention was to explain the passions only as a natural philosopher [*en physicien*], and not as a rhetorician or even as a moral philosopher.

This point offers an interesting comparison with Spinoza. Spinoza shares the Cartesian ideal of value-neutral enquiry, even if, as we shall see in a moment, his methodological conception is somewhat different. In the preface to the third book of his *Ethics* he sums up the *sine ira et studio* methodology of his subsequent treatment of affects as follows.

For now I wish to return to those who prefer to curse or laugh at the Affects and actions of men, rather than understand them. To them it will doubtless seem strange that I should undertake to treat men’s vices and absurdities in the Geometric style, and that I should wish to demonstrate by certain reasoning things which are contrary to reason, and which they proclaim to be empty, absurd, and horrible. [...]

The Affects, therefore, of hate, anger, envy, etc., considered in themselves, follow from the same necessity and force of nature as the other singular things. And therefore they acknowledge certain causes, through which they

⁹ Art. 27: Descartes 1985, p. 338.

¹⁰ See Kambouchner 1996.

are understood, and have certain properties, as worthy of our knowledge as the properties of any other thing, by the mere contemplation of which we are pleased. Therefore, I shall treat the nature and powers of the Affects, and the power of the Mind over them, by the same Method by which, in the preceding parts, I treated God and the Mind, and I shall consider human actions and appetites just as if it were a Question of lines, planes, and bodies.¹¹

Though both Descartes and Spinoza advocate a value-neutral enquiry, there is an important difference between them, as can be seen also from this quotation: while the Cartesian theory was modeled primarily on physics, Spinoza's approach is modeled on geometry.¹² This difference is also responsible for their parting company when it comes to the mind-body relation. When Spinoza claims in the preface to the fifth book that "this gland is not found to be so placed in the middle of the brain that it can be driven about so easily and in so many ways, and that not all the nerves extend to the cavities of the brain", this "experimental" refusal of Descartes' theory does not yet reveal the depth of their disagreement. Nor does the following explication, which, nevertheless, brings us closer to the real theoretical issue:

And of course, since there is no common measure between the will and motion, there is also no comparison between the power, or forces, of the Mind and those of the Body. Consequently, the forces of the Body cannot in any way be determined by those of the Mind.

However convincing this argument is, there is a further issue that lies at the bottom of the disagreement between Descartes and Spinoza. Geometry does not call for anything really extended in the explanation for the connection between thinking and extension, a connection which exists despite their distinct nature. For the philosopher as geometer places that difference at the level of the attributes, not at the level of substance. Just like figures mirroring each other on the two sides of an axis, mind and body have their own identities and differences, and the explanation for their relationship does not need special reference to either of the two (in contrast with Descartes' "extremely fine" form of real extension).

However, overestimating the methodological difference between Descartes and Spinoza would be just as wrong as underestimating the difference between their theories of emotion. For both of them admired the *Elements* of Euclid, and they both tried to follow the Euclidean model in their accounts of the emotions. They both begin with a set of elementary passions or affects and derive all the rest from these "primitives". Descartes enumerates six such passions: wonder, desire, joy, sadness, love and hatred. Spinoza's system has a more "elementary" character: he acknowledges only the three

¹¹ Spinoza 1985 ("Curley"), p. 492.

¹² See Jaquet 2002.

basic affects of desire, joy and sadness; with desire having a special role to play, in that it accompanies all the derivative affects of both joy and sadness.

I cannot venture to present here in detail Descartes' and Spinoza's description of the emergence and most significant properties of the particular emotions. What I would like to do instead is to proceed to explore certain links between seventeenth-century accounts and emotion theories today. Having accomplished this, I will look at Damasio's proposed synthesis between neuroscience and early modern philosophy.

First, let me return to a point I have already mentioned: that it was Descartes who developed the first type of neuroscience, in the form of neuromechanics. In their *Understanding Emotion*—an excellent work in other respects—Oatley and Jenkins, despite otherwise acknowledging Descartes' merits, set up a straw man in their reconstruction of Descartes' odd mechanical story of the sense-action connection via animal spirits and the pineal gland. A different interpretation and, in my view, a most promising treatment of the issue can be found in a book and an important study by John Sutton. “[T]he Cartesian legacy,” Sutton quotes, “has furnished contemporary thinking with a paradigm of the body as an inert, closed, and anonymous object.”¹³ “But in fact,” he continues in his own voice:

as Malebranche puts it in introducing his account of the passions, the Cartesian view of the body implies that ‘we are to some extent joined to the entire universe’ [...] It takes *revision of received wisdom* to find room in Cartesianism for the picture of highly theorized, porous, particular bodies as temporary pockets of stability embedded in social and physical worlds. (Sutton 1998a, p. 125, italics are added)

It is precisely this “revision” that Sutton undertakes in his book Sutton 1998b, to the effect that

[t]he resulting orientation renders less surprising the notion of distributed memories, always in motion, never stored passively and faithfully in inert cells in a memory palace, but superimposed and reconstructed according to the peculiarities of history and current context. (Sutton 1998a, p. 125)

Sutton 1998a (where the above quotation come from) connects the theme of the emotions to the author's novel interpretation of the ways in which animal spirits and the brain function in memory storage processes.

Let us move now from the issues concerning different models of “hard-wiring” to the question of how to define emotions at a more abstract level. Oatley and Jenkins base their tripartite definition on Nico Frijda's conception in *The Emotions*. In the first part

¹³ This is in fact a quotation from a call for papers issued by Steve Burwood and Gill Jagger for a conference on *Body Matters*.

they deal with the causal prerequisites of the emotions, in the second with their motivational force, while in the third with emotions' presence in the mind as mental states.¹⁴ An emotion arises when a person perceives an event as relevant to something that is salient for her. The emotion will be positive if the event favours the valued thing; negative if it hinders its realization. Now, it seems obvious that seventeenth-century thinkers would welcome this as part of a general definition of emotion. For example, Thomas Hobbes in Chapter 6 of his *Leviathan* (E 1651 / L 1668), having explained that the way we get influenced by bodies in the outer world is sensing them and that what remains after sensation is "fancy", introduces the concept of "small beginnings" of voluntary motion that follow upon the "fancy" of an object or event retained in "imagination". As he explains:

These small beginnings of motion within the body of man before they appear in walking, speaking, striking, and other visible actions, are commonly called Endeavour. This endeavour, when it is toward something which causes it, is called Appetite or Desire [...] And when the endeavour is fromward something, it is generally called Aversion. These words, *appetite* and *aversion*, we have from the *Latin*, and they both of them signify the motions, one of approaching, the other of retiring. (Hobbes 1994, 27 ff.)

So voluntary motions are elicited by a memory trace of an event that we deem to help or to hinder the realization of what we think important for us.

Locke (and also Leibniz) concurs. It is also interesting to compare here the **carefully** crafted foundations of Spinoza's systematic theory of emotion with the second part of the contemporary definition cited above. For Spinoza, desire is the general motivational force behind all emotions, prior to the distinction of what he terms "joy" and "sadness". The importance of desire is much greater than that of any particular emotion. Desires are the genera of all emotions, as it were, and it is in them that elementary consciousness of both ourselves and of the objects affecting us is articulated.¹⁵

This characteristic of Spinoza's theory links up with the second and third aspects of an emotion in the theory advocated by Frijda, Oatley and Jenkins. The second aspect is the capacity of the emotions to trigger action-readiness and direct action towards something to which the emotion attributes the character of urgency, while the third is that emotions are experienced as mental states of a particular type, sometimes accompanied by bodily changes. Spinozean desire can perfectly well be interpreted as something that triggers action-readiness, and as a kind of mental state in which we experience ourselves, and the objects affecting us, in a special way.

¹⁴ Oatley & Jenkins 1996, ch. 4.

¹⁵ See the definitions and explications of desire in *The Ethics* Book 3, Prop. 9 and the first of the "Definitions of Affects".

Besides defining emotion, a further general issue in emotion theory today is that of the so-called “basic emotions”. The notion itself is controversial and unclear, since we might attach different senses to the word “basic”. Paul Ekman hoped to identify emotions which – together with their associated facial expressions – can be found universally. Robert Solomon (Solomon 2003, pp. 115-142) examines several other meanings of the term.¹⁶ Let me mention a further meaning which is employed by most neuroscientists: “basic” as meaning “hard-wired in the brain”. Perhaps the most renowned partisan of this view is Jaak Panksepp.¹⁷ Concerning the biological basis of emotions, Panksepp maintains that “genes are not just passive repositories of ancestral knowledge, but dynamically responsive information stores”. He claims that “many developmental changes” we “may be genetically prepared to believe” to be due to “environmental events” are as much to be attributed to “the epigenetic unfolding of hereditary tendencies stored within DNA. The brain is full of special and general-purpose mechanisms that have been constructed through evolutionary reinforcement. At least in rough outline, the basic emotions are such entities” (Ekman & Davidson 1994, p.21). Panksepp then proceeds to present an even bolder approach: whatever items are on the different lists of allegedly basic emotions, “the cardinal neuroscientific issue is whether there are common principles among the underlying circuit functions of the brain that should encourage us to place only certain items in the same category” (Ekman & Davidson 1994, p. 22). The answer is immediately given in the guise of a “useful starting point”: basic emotions are “at least in part” to be defined “with respect to neural circuit characteristics”. Panksepp thinks “it is reasonable to view basic emotions as arising from coherent brain operating systems that have a considerable number of shared neural characteristics”. One candidate characteristic is the capacity to “orchestrate and coordinate a large number of output systems in response to specific inputs”; another is the capacity to “generate characteristic internal feeling states” (Ekman & Davidson 1994, 23 ff.).

Such a radically scientific-minded characterization of basic emotions—its starting-point not being a phenomenological description of the common subjective experience of everyday emotions, but neuroscientific experiments revealing processes that are not, as such, accessible to subjective experience—is not at all alien to seventeenth-century thinking. We may safely assume that Descartes, who himself practised or at least did not object to the vivisection of animals, would be intensely interested in contemporary neurophysiological research. He would most probably find the description of the way in which basic emotion processes are, at least in part, genetically pre-given and defined “with respect to neural circuit characteristics” congenial to his own idea that certain passionate reactions to particular kinds of input are operated in us *by nature*. Consider, for example the following passage from *The Passions of the Soul*:

¹⁶ See also Ekman & Davidson 1994, esp. pp. 5-47: “Question 1: Are There Basic Emotions?”.

¹⁷ See his contributions to Ekman & Davidson 1994.

I explained in the Optics how the objects of sight make themselves known to us simply by producing, through the medium of the intervening transparent bodies, local motions in the optic nerve-fibres at the back of our eyes, and then in the regions of the brain where these nerves originate. I explained too that the objects produce as much variety in these motions as they cause us to see in the things, and that it is not the motions occurring in the eye, but those occurring in the brain, which directly represent these objects to the soul. By this example, it is easy to conceive how sounds, smells, tastes, heat, pain, hunger, thirst and, in general, all the objects both of our external senses and of our internal appetites, also produce some movement in our nerves, which passes through them into the brain. Besides causing our soul to have various different sensations, these various movements in the brain can also act without the soul, causing the spirits to make their way to certain muscles rather than others, and so causing them to move our limbs. (Art. 13)

There are other passages which identify the encoding behind these bodily processes as a certain “activity” of “nature.” The idea is directly applied to the functioning of the emotions, that is, the passions in the narrow sense:

For the movement of the gland, whereby the spirits are driven to the optic nerve in the way required for enlarging or contracting the pupils, has been *joined by nature* with the volition to look at distant or nearby objects, rather than with the volition to enlarge or contract the pupils. (Art. 44)

[R]epulsion is *ordained by nature* to represent to the soul a sudden and unexpected death. (Art. 89)

[T]he principal attraction comes from the perfections we imagine in a person who we think capable of becoming a second self. *For nature has established* a difference of sex in human beings, as in animals lacking reason, and with this *she has also implanted* certain impressions in the brain which bring it about that at a certain age and time we regard ourselves as deficient – as forming only one half of a whole, whose other half must be a person of the opposite sex. In this way *nature represents*, in a confused manner, the acquisition of this other half as the greatest of all goods imaginable. Although we see many persons of the opposite sex, yet we do not desire many at any one time, since *nature does not make us imagine* that we need more than one other half. But when we observe something in one of them which is more attractive than anything we observe at that moment in the others, this determines our soul to feel towards that one alone all the inclination which *nature gives* it to pursue the good which it represents as the greatest we could possibly possess. (Art. 90; all italics are added)

It seems to me that Descartes' description of how sensory impulses travel in the nerves does not differ in principle – i.e. in its philosophical outlook – from Panksepp's idea in the following passage. Panksepp considers a

minimalist example – the genetically ingrained tendency of a rat to exhibit fear in response to the smell of a cat. The information comes in via the vomeronasal nerve, which, after passing through the accessory olfactory bulb, synapses largely in the preoptic area and medial amygdale. From the medial amygdale, the information travels largely via the stria terminalis to the anterior hypothalamus, where the information appears to be further integrated with fear command circuitry, which then descends to the periventricular gray [...] At no point in this flow did the fearful smell have to be processed by thalamo-cortical systems [i.e. no cognitive processes are to be involved] [...] In a similar way, sounds can provoke fear with no cortical processing. (Ekman & Davidson 1994, 225 f.)

At the same time, I do see an interesting difference between the two authors' attitudes towards the values involved in the emotion processes described. Each of them presents a complex position. Panksepp urges "the disciplines concerned with the objective behavior of animals" to take seriously the issue of "internal biological values," without which he doubts "if any credible model of behavior could ever be generated" (Ekman & Davidson 1994, p. 24). In this, he is in agreement with the Dutch biologist Frans B. M. De Waal.¹⁸ De Waal's main concern is that although his discipline, i.e., evolutionary biology, undeniably takes the issue of moral values seriously, it is still on the wrong track, one that is at odds with Darwin's original insights, as well as with facts concerning the behavior of primates. De Waal's problem is that leading biologists, following Thomas Henry Huxley, dispute that moral values emerge from evolution. Instead, they endorse the view that all morality is created by culture *against* the evolution-based and genetic instinctive selfishness of our pure biological being. De Waal argues that in *The Descent of Man* (1871) Darwin himself "unequivocally stressed morality as part of human nature" (De Waal 2005, p. 7). Darwin recognized that promoting self-serving behavior "by no means precludes the evolution of altruistic and sympathetic tendencies" and he "emphasized continuity with animals even in the moral domain" (De Waal 2005, p. 11).

The likely origin of this emphasis on sympathy is to be found in the work of David Hume and Adam Smith. For this reason, one could argue that Darwin was inspired by his *a priori* philosophical predilections rather than by *a posteriori* experiments. Nevertheless, contemporary experimental research also seems to support his thesis. De Waal uses the expression "emotional contagion" to refer to what happens when, in the case of one-year old children, household pets, and primates living wild, "the emotional state

¹⁸ I rely here on De Waal 2005.

of one individual induces a matching or related state in another” (De Waal 2005, p. 16). This he considers the first layer in his “Russian Doll Model,” which is meant to show how conscious forms of empathy with a cognitive, cultural, and social basis develop not *against* “this firm, hard-wired basis” of “automatic emotional impact,” but rather on top of this (De Waal 2005, p. 23). Thus, the—in itself value-neutral—investigation of the basic conditions of our *bios* exposed the primitive value of others in the form of the phenomenon of emotional contagion. This seems to involve a sort of teleology that does not, however, leave behind the realm of natural evolution:

Inasmuch as the survival of many animals depends on concerted action, mutual aid, and information transfer, selection must have favored proximate mechanisms to evaluate the emotional states of others and quickly respond to them in adaptive ways. (De Waal 2005, p. 23)

Returning to Descartes now, we find that his promise of investigating the passions *en physician* certainly does not mean leaving aside all considerations concerning values within nature. As it is clear from the text of the *Meditations on First Philosophy*—and as I have argued in Boros 2005—the concept of nature is as ambivalent as other main concepts in Descartes’ philosophy. On the one hand, in early works such as *The World* nature seems to be a self-contained system of drives and principles of a (proto-)evolution, including those related to the development of human beings. In the *Meditations*, on the other hand, we encounter a different concept of nature:

Indeed, there is no doubt that everything that I am taught by nature contains some truth. For if nature is considered in its general aspect, then I understand by the term nothing other than God himself, or the ordered system of created things established by God. And by my own nature in particular I understand nothing other than the totality of things bestowed on me by God. (CSM 2, p. 56)

An interesting alternative to this view is an episode of the sceptical argument of the first meditation, which offers a glimpse of an Epicurean-evolutionary idea of nature – without a God-creator.

Perhaps there may be some who would prefer to deny the existence of so powerful a God rather than believe that everything else is uncertain. Let us not argue with them, but grant them that everything said about God is a fiction. According to their supposition, then, I have arrived at my present state by fate or chance or a continuous chain of events, or by some other means; yet since deception and error seem to be imperfections, the less powerful they make my original cause, the more likely it is that I am so imperfect as to be deceived all the time. (CSM 2, p. 14)

What can we say now, in the light of this ambiguity, about the operative nature in the previous quotations from *The Passions of the Soul*? It seems clear that it is the God-created nature that is at work there; and if it is God behind nature establishing *epistemological* values in the form of a “good sense”, why would He refrain from granting basic *moral* values in the form a *good will*? Thus, Cartesian nature, in the final analysis, is not free of positive values, and the path of these values leads us beyond pure nature, to her transcendent creator and maintainer. Unlike De Waal’s, Descartes’ teleology is not inherent in nature.

In contrast, we can make perfect sense of the modern idea of emotional contagion in the context of Spinoza’s *Ethics* (1677). In Proposition 27 of Book 3, Spinoza anticipates the idea promoted by De Waal and Hatfield and others (Hatfield, Cacioppo & Rapson 1994). Spinoza claims that:

[i]f we imagine a thing like us, toward which we have had no affect, to be affected with some affect, we are thereby affected with a like affect. (Curley p. 508)

The demonstration provides further explanation:

The images of things are affections of the human Body whose ideas represent external bodies as present to us (by IIP17S), i.e. (by IIP16), whose ideas involve the nature of our Body and at the same time the present nature of the external body. So if the nature of the external body is like the nature of our Body, then the idea of the external body we imagine will involve an affection of our Body like the affection of the external body. Consequently, if we imagine someone like us to be affected with some affect, this imagination will express an affection of our Body like this affect. And so, from the fact that we imagine a thing like us to be affected with an affect, we are affected with a like affect. But if we hate a thing like us, then (by P23) we shall be affected with an affect contrary to its affect, not like it, q.e.d.

De Waal’s Russian Doll Model can also be elaborated in a Spinozean manner. The above imitation of affect involves but a minimum of cognitive activity, which is at the most fundamental level of empathy. The next level is reached in propositions 21 to 24. Here, Spinoza speaks of a transfer of affect in cases where the subject is already “tuned up” emotionally, that is, loves or hates the thing in question:

He who imagines what he loves to be affected with Joy or Sadness will also be affected with Joy or Sadness; and each of those affects will be greater or lesser in the lover as they are greater or lesser in the thing loved. (Prop. 21)

Spinoza also mentions the opposite case, in which the subject hates another person, and so finds joy in her grief. This apparently contradicts, rather than follows, the Rus-

sian Doll Model: the second level does not seem to contain the first. But Spinoza adds a remark to proposition 23, reminding the reader that “this Joy can hardly be enduring and without any conflict of mind. For (as I shall show immediately in P27) insofar as one imagines a thing like oneself to be affected with an affect of Sadness, one must be saddened. And the opposite, if one imagines the same thing to be affected with Joy”. Thus, the second level conforms to the first even in these cases.

As we have seen, on the second level, the subject can be tuned up through, in Spinoza’s sense, “inadequate ideas”. On the third level, in turn, there is no more space for hatred: even if we are afflicted by some wrong-doing, the hatred that arises from this is “to be conquered by love, or generosity, not by repaying it with Hate in return”. This threefold scheme of natural empathy could be extended to various human social formations; but it is not my task here to develop the theme in that direction. The moral I would like to draw from these comparisons is that Spinoza elaborated on an idea of teleology, without a transcendental creator and maintainer of a *telos*, which seems closer to what contemporary neuroscientists and biologists either call for, or practice, in a new form. Jonathan Israel might even have been right when collecting the scattered evidence of Spinoza’s clandestine influence, which may have resulted in a not very specific effect upon the developing scientific thinking (Israel 2001).

Approaching the end of this paper, I would like to turn briefly to Damasio’s understanding of seventeenth-century thinkers. I do not want to dwell on Spinoza, whom Damasio interpreted as correcting the erroneous ideas of Descartes, since I am always glad to see Spinoza’s philosophy employed in the service of helping humankind approach its unattainable end of perfection. So I will confine myself to some thoughts concerning *Descartes’ Error*, the main thesis of which is that the pure or high rationalist view of human activity Descartes was committed to by his rigid dualism of mind and body inevitably leads to socio- and psychopathological consequences, as it ignores the bodily emotions and feelings that are largely responsible for decision making.

Tom Sorell’s recent book (Sorell 2005) contains a short, but well-argued and convincing chapter on “Damasio’s Error” (pp. 114-126), which lays bare some crucial incoherencies and *non sequitur* in Damasio’s use of the case studies meant to support his thesis. “My own view,” Sorell concludes,

is that the class of cases Damasio constructs [in chapter 4 of his book] does not display enough of a common pattern, and that he never establishes that brain damage affects decision making by way of emotional damage. [...] Damasio seems to me to maintain coherence among very different cases [...] only by correlating a fairly constant kind of brain damage with a very vaguely described kind of behavioural failing – bad decision making. (Sorell 2005, p. 120)

It seems that Damasio fails to differentiate between *metaphysical* theses and *physiological* explanations in Descartes—in fact, he ignores the latter. Further, he denounces rather than argues against rationalism in decision making. He links to rationalism not only irresolution in such trivial matters as choosing between two dates for an appointment, but also to cold-blooded serial killing, without adequate argument. This view strikes many of us as extreme. At the other extreme, we may imagine what would happen to someone who took positive and negative somatic influences to be automatic clues to a good decision.

Damasio's views are not as far from those of Descartes as he seems to think, however. He puts forward the idea of a “feeling of being” and a hypothesis on the role of what he terms “somatic marker”. Damasio posits a sort of uneasiness, *Unbehagen*, a gut-feeling reflecting the overall state of our bodies, which works towards the settling of problems. Now if we take seriously what Descartes says about the decisive difference between human-like machines and real human beings in the fifth part of his *Discourse on Method*, we have to come to the conclusion that on his view, there must be something in real humans that functions similarly to Damasio's feeling of being and somatic marker. Let me quote two passages from *Discourse 5*. The first quote exposes the futility of all attempts to present the pure mind as wholly separate from the body in Descartes:

[I]t is not sufficient for it [the human soul] to be lodged in the human body like a helmsman in his ship, except perhaps to move its limbs, but that it must be more closely joined and united with the body in order to have, besides this power of movement, feelings and appetites like ours and so constitute a real man. (CSM 1 p. 141)

Another crucial passage in which the difference between “real men” and human-like automata is at least hinted at is the following:

The first is that they could never use words, or put together other signs, as we do in order to declare our thoughts to others. For we can certainly conceive of a machine so constructed that it utters words, and even utters words which correspond to bodily actions causing a change in its organs (e.g. if you touch it in one spot it asks what you want of it, if you touch it in another it cries out that you are hurting it, and so on). But it is not conceivable that such a machine should produce different arrangements of words so as to give an appropriately meaningful answer to whatever is said in its presence, as the dullest of men can do. Secondly, even though such machines might do some things as well as we do them, or perhaps even better, they would inevitably fail in others, which would reveal that they were acting not through understanding but only from the disposition of their organs. For whereas reason is a universal instrument which can be used in all kinds of situations, these organs need some particular disposition for each particular action; hence it is for all practical purposes

impossible for a machine to have enough different organs to make it act in all the contingencies of life in the way in which our reason makes us act. (CSM 1, p. 139)

Now we can see that Damasio argues against a straw man when he suggests that Descartes' man is not a real human being, but at best a well-programmed mind-machine. Real men's real reason must essentially have the flexibility to find the right answers and identify the right behavior in unpredictable situations. In order for appropriate reactions to be possible, reason must also have the ability to control the situations in which real men find themselves. Imaginary men with no limitations and actually existing, essentially finite humans equally need such an "organ" of flexibility. But the latter also have constraints on the set of available alternatives in any given situation. As the very last sentence of the *Meditations* shows, Descartes was well aware of this:

But since the pressure of things to be done does not always allow us to stop and make such a meticulous check, it must be admitted that in this human life we are often liable to make mistakes about particular things, and we must acknowledge the weakness of our nature. (CSM 2, p. 61)

It is the responsibility of the will to decide even when there are no invincible arguments at its disposal. We could hardly find better providers of assistance with this than the various passions Descartes explores in *The Passions of the Soul*.

It was not my intention to offer a comprehensive survey of all the forms of exchange between contemporary theorists of emotion and seventeenth-century thinkers. Rather, I picked up some threads that can guide us in our thinking of the relationship between theories of the two periods. I hope I have offered some reason to think that an exchange between early modern philosophy and contemporary philosophical and scientific approaches to the theme of the emotions can be fruitful not only from the point of view of the historian, but also from that of the philosopher.

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